



Michigan Department of Environmental Quality
Waste and Hazardous Materials Division

SOLID WASTE DISPOSAL AREA OPERATING LICENSE

This license is issued under the provisions of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.11501 et seq., and authorizes the operation of this solid waste disposal area (Facility) in the state of Michigan. This license does not obviate the need to obtain other authorizations as may be required by state law.

FACILITY NAME: Smiths Creek Landfill

LICENSEE/OPERATOR: County of St. Clair, Michigan

FACILITY OWNER: County of St. Clair, Michigan

PROPERTY OWNER: County of St. Clair, Michigan

FACILITY TYPE(S): Municipal Solid Waste Landfill; and Research, Development, and Demonstration Project

FACILITY ID NUMBER: 452546

COUNTY: County of St. Clair

LICENSE NUMBER: 9177

ISSUE DATE: March 25, 2008

EXPIRATION DATE: March 25, 2013

FACILITY DESCRIPTION: The Smiths Creek Landfill, a Municipal Solid Waste Landfill and Research, Development, and Demonstration Project, consists of 264.5 acres located at 6779 Smiths Creek Road, Kimball Township, St. Clair County, Michigan, as identified in Attachment A and fully described in this license.

AREA AUTHORIZED FOR DISPOSAL OF SOLID WASTE: Identified in item two of the license.

RESPONSIBLE PARTY: Mr. Matthew B. Williams, Environmental Manager
County of St. Clair, Michigan
6779 Smiths Creek Road
Smiths Creek, Michigan 48074
810-989-6979

RENEWAL OPERATING LICENSE: This License Number 9177 supersedes and replaces Solid Waste Disposal Area License Number 9140 issued to the County of St. Clair, Michigan, on August 3, 2006.

This license is subject to revocation by the Director of the Michigan Department of Environmental Quality if the Director finds that this Facility is not being constructed or operated in accordance with the approved plans, the conditions of a permit or license, Part 115 of the NREPA, or the rules promulgated under Part 115. Failure to comply with the terms and provisions of this license may result in legal action leading to civil and/or criminal penalties pursuant to Part 115 of the NREPA. This license shall be available through the licensee during its term and remains the property of the Director.

THIS LICENSE IS NOT TRANSFERABLE.

Steven R. Sliver, Chief, Storage Tank and Solid Waste Section
Waste and Hazardous Materials Division

Licensee: County of St. Clair
Facility Name: Smiths Creek Landfill
Operating License Number: 9177
Issue Date: March 25, 2008

The licensee shall comply with all terms of this license and the provisions of Part 115 and the administrative rules implementing Part 115 (Part 115 Rules). This license includes the license application and any attachments to this license.

1. The licensee shall operate the Facility in a manner that will prevent violations of any state or federal law.
2. The following portions of the Facility are authorized to receive solid waste by this license:
 - a. **ACTIVE PORTIONS NOT AT FINAL GRADE:** The area(s) identified as Cell B (6.7 acres), Cell 1 (6.9 acres), Cell 2 (7.1 acres), Cell 2B (5.6 acres), Cell 2C (0.8 acres-in the previous license this area received only inert fill but with the issuance of the construction permit described in Item 8 the area became authorized to eventually receive Type III waste), Cell 5 (6.9 acres), Cell 6 (6.8 acres), Cell 3' (6.9 acres), and "Former Active Area" (27.1 acres) were authorized to receive waste by the previous license. This area's total acreage is 74.0 acres.
 - b. **RESEARCH, DEVELOPMENT, AND DEMONSTRATION PROJECT (RDDP) CONSTRUCTED AREAS CERTIFIED WITH THIS APPLICATION:** The area identified as Cell 3 (6.9 acres) was not authorized as an RDDP by the previous license, but is authorized by this license. This area's total acreage is 6.9 acres.
3. The following portions of the Facility **WILL BE** authorized to receive solid waste by this license following approval by the Michigan Department of Environmental Quality (MDEQ) of construction certification:

UNCONSTRUCTED AREA(S) WITH FINANCIAL ASSURANCE: The area(s) identified as Cell 7, totaling 7.2 acres, are included in the calculation of financial assurance as required by Section 11523 of Part 115 of the NREPA. This portion(s) of the Facility shall be authorized to receive waste, as part of this license, when acceptable certification is submitted to the MDEQ, as required by Section 11516(5) of Part 115, and determined by the MDEQ to be consistent with Part 115 and the Part 115 Rules. The certification shall verify that construction of this area(s) was in accordance with the Construction Permit(s) listed in Item 8 of this license, Part 115, and the Part 115 Rules.
4. The following portions of the Facility are **NOT** authorized to receive solid waste by this license:
 - a. **UNCONSTRUCTED AREA(S) WITHOUT FINANCIAL ASSURANCE:** The area(s) identified as Cell 4 (4.1 acres), Cell 8 (5.5 acres), Cell 9 (3.0 acres), Cell 10 (3.5 acres), and Cell 11 (3.5 acres) are not constructed and are not included in the calculation of financial assurance as required by Section 11523 of Part 115 of the NREPA. This area's total acreage is 19.6 acres.
 - b. **CLOSED UNIT(S) OR A PORTION OF A UNIT WHERE THE FINAL COVER HAS BEEN CERTIFIED CLOSED AND ACCEPTED BY THE MDEQ:** The following unit(s) and/or portion(s) are closed:

PRE-EXISTING UNIT(S): The unit(s) identified as Closed Area had final closure certified on January 21, 1990. This certification was reviewed and approved by the MDEQ on January 21, 1990. This area's total acreage is 56.2 acres.
5. The attached map (Attachment A) shows the Facility, the area permitted for construction, monitoring points, leachate storage units, site roads, other disposal areas, and related appurtenances.
6. Issuance of this license is conditioned on the accuracy of the information submitted by the Applicant in the Application for License to Operate a Solid Waste Disposal Area (Application) received by the MDEQ on October 15, 2007, and any subsequent amendments. Any material or intentional inaccuracies found in that information is grounds for the revocation or modification of this license, and may be grounds for enforcement action. The licensee shall inform the MDEQ's Waste and Hazardous Materials Division (WHMD), Southeast Michigan District Supervisor, of any inaccuracies in the information in the Application upon discovery.

Licensee: County of St. Clair
Facility Name: Smiths Creek Landfill
Operating License Number: 9177
Issue Date: March 25, 2008

7. This license is issued based on the MDEQ's review of the Application, submitted by the County of St. Clair, Michigan, for the Smiths Creek Landfill, dated October 8, 2007, and revised January 14, 2008. The Application consists of the following:

- a. Application Form EQP 5507.
- b. Application fee in the amount of \$2,500.00.
- c. Certification of construction by Dr. Xianda Zhao, CTI & Associates, dated December 21, 2007.
- d. Waste Characterization: N/A.
- e. Restrictive Covenant:

The Smiths Creek Landfill restrictive covenant on 264.5 acres is on file at the St. Clair County Register of Deeds recorded on June 3, 2002, as Liber 2449 pages 928-931. A copy is on file with the MDEQ.

- f. Perpetual Care Fund Agreement, established as an escrow account, signed by Mr. Donald E. Doge, Administrator, St. Clair County, on March 13, 2007, was executed by the MDEQ on April 17, 1997.
- g. Financial Assurance.

i. Financial Assurance Required:

The amount of financial assurance required for this Facility was calculated based on the calculation worksheet form EQP 5507A entitled, "Form A Financial Assurance Required," and is \$11,913,729.00.

The Facility has provided financial assurance totaling \$11,948,813.00, based on the requirements of Section 11523 of Part 115, consisting of a combination of the Perpetual Care Fund established under Section 11525, bonds, and the financial capability of the Applicant as evidenced by a financial test. The financial assurance mechanisms used by the Facility are summarized below in Items ii, iii, and iv, respectively.

ii. Financial Assurance Provided Via a Perpetual Care Fund:

- (1) The amount of the required financial assurance can be reduced pursuant to Section 11524 of Part 115, if the amount of money in the Perpetual Care Fund plus the amount of the reduced financial assurance equals the amount of financial assurance required in Section 11523 of Part 115, and is approved by the MDEQ.
- (2) The Perpetual Care Fund Agreement statement showed a balance of \$1,725,403.00 in the Facility's Perpetual Care Fund as of June 30, 2007. Of this amount, the MDEQ has granted the request to use \$1,725,403.00 toward the total amount of financial assurance required.

iii. Financial Assurance Provided Via Bond:

The following financial assurance has been received from the Applicant to meet the amount of financial assurance required:

Irrevocable Letter of Credit \$2,595,000.00

Total Amount Received: \$2,595,000.00

iv. Financial Assurance Provided Via a Financial Test for a Type II Landfill:

A financial test may be used by the owner of a Type II landfill as a means to meet an amount up to, but not exceeding, 70 percent of the closure, postclosure, and corrective action cost estimate pursuant to Section 11523a OF Part 115. This Facility has provided a financial test in the amount of \$7,628,410.00.

Licensee: County of St. Clair
Facility Name: Smiths Creek Landfill
Operating License Number: 9177
Issue Date: March 25, 2008

Financial capability demonstrated by a financial test must be updated each fiscal year. The next update is due June 30, 2008, and each year thereafter. If the owner/operator fails to update the test, or is no longer able to satisfy the test, the owner/operator must obtain alternate financial assurance within 210 days following the close of the owner's/operator's fiscal year.

v. Financial Assurance Updates Required:

For Type II landfills, the financial assurance cost estimates of closure and postclosure activities must be updated annually and the corresponding requisite amount of financial assurance must be adjusted annually for the costs of inflation. The corresponding financial assurance, as adjusted for inflation and other factors, is due on March 25, 2009, and each year thereafter.

8. This previously "grandfathered" Facility did not have a construction permit until Solid Waste Disposal Area Construction Permit Number 4061 was issued to the County of St. Clair, Michigan, on April 8, 2004. The Facility's first license (Number 2452) was issued on May 29, 1967, pursuant to the repealed Garbage and Refuse Disposal Act, 1965, PA 87. The following documents approved prior to, and with the issuance of, the aforementioned construction permit, are incorporated in this license by reference:
- a. Engineering plans, dated July 17, 1979.
 - b. Construction Permit Application for Smiths Creek Landfill Solid Waste Disposal Area Vertical Expansion, Volumes I, II, and III, prepared by CTI and Associates, Inc., dated December 2003 and revised March 2004.
 - c. Engineering plans titled "Smiths Creek Landfill Construction Permit, Kimball Township, St. Clair County, Michigan." The plans consisting of 24 sheets were prepared by CTI and Associates, Inc., dated December 2003 and revised May 2004, April 2005, and May 2005.
 - d. Redesign of final stage plans received by the MDEQ on September 5, 1990.
 - e. Development Phases Plan received by the MDEQ on April 2, 1992, and Phase 1 Supplemental Leachate Collection Systems Work Plans, dated May 7, 1993.
 - f. Closure Plans for filled areas received by the MDEQ on April 17, 1994.
 - g. Groundwater Monitoring Plan and Hydrogeological Assessment for Smiths Creek Landfill, prepared by Wehran EMCON, dated October 1994, and revised August 1995.
 - h. Phase 5 Design Engineering Report and CQA Plan, dated April 1996, including engineering sheets 1-10 dated April 1996.
 - i. Construction Certification titled, "Certification Report for Phase 5 Construction," prepared by EMCON, dated January 1997.
 - j. Phase 6 Construction Plans, dated April 5, 1999, and CQA Plan, dated April 21, 1999.
 - k. Construction Certification titled, "Construction Documentation Report for Smiths Creek Landfill Cell 6," prepared by IT-EMCON, dated October 1999, and approved December 21, 1999.
 - l. Statistical Analysis of Background Groundwater Monitoring Data for Smiths Creek Landfill, prepared by IT-EMCON, dated October 1999.
 - m. Construction Quality Assurance Plans, prepared by EMCON/OWT Solid Waste Services, dated March 2000.
 - n. Construction Certification titled, "Construction Documentation Report, Smiths Creek Landfill – Cell 2," prepared by IT-EMCON/OWT, dated November 2000, approved by the MDEQ on December 12, 2000.

Licensee: County of St. Clair
Facility Name: Smiths Creek Landfill
Operating License Number: 9177
Issue Date: March 25, 2008

- o. Leachate Recirculation Design and Operating Plan, St. Clair County, Smiths Creek Landfill, prepared by CTI and Associates, Inc., dated November 2000, and approved on December 12, 2000.
 - p. Alternate Daily Cover Materials Operations Plan (ADCM Plan), Smiths Creek Landfill, St. Clair County, Michigan, prepared by CTI and Associates, Inc., and dated October 2001, has been superseded by the ADCM Plan contained in the document list in Item 10a.
 - q. Document titled "Hydrogeologic Monitoring Plan, Smiths Creek Landfill, St. Clair County, Michigan," dated December 2003 and revised March 2004.
 - r. Construction Certification titled, "Cell 2B Construction Documentation Report," prepared by CTI and Associates, Inc., and dated November 2003 and approved by the MDEQ on January 30, 2004.
9. The following additional documents, approved since the issuance of the construction permit referenced in Item 8, are incorporated in this license by reference:
- a. Document titled "Proposed Enhancement to the Leachate Recirculation Design and Operations Plan of the Approved Construction Permit," dated December 10, 2004.
 - b. Document titled "Engineering Improvements, Smiths Creek Landfill, St. Clair County, Michigan," dated April 2005.
 - c. Construction Certification titled, "Cell 3 Construction Documentation Report," prepared by CTI and Associates, Inc., dated January 2006.
 - d. Construction Certification titled, "2005 Final Slope Cap Construction Documentation Report," prepared by CTI and Associates, Inc., dated February 2006.
 - e. Document titled "Addendum to the Partial Cell 3 Construction Documentation Report," prepared by CTI and Associates, Inc., dated March 31, 2006.
 - f. Documents titled "Slideslope Stability Evaluation, Cell 7 Construction, Smiths Creek Landfill," prepared by CTI and Associates, Inc., dated April 2007.
 - g. Engineering plans titled "Smiths Creek Landfill, Cell 7 Construction Drawings," prepared by CTI and Associates, Inc., dated May 2007.
 - h. Document titled "Prevention of Prohibited Waste Disposal Plan, Smiths Creek Landfill," prepared by CTI and Associates, Inc., revised March 2008.
 - i. Letter titled "Smiths Creek Landfill, Cell 3B Geomembrane Repair, Construction Quality Assurance/Quality Control Documentation Letter," prepared by CTI and Associates, Inc., dated March 13, 2008.
10. The following documents approved with the issuance of the Research, Development, and Demonstration Project (RDDP) Construction Permit Number 4085 issued on February 23, 2007, are incorporated in this license by reference:
- a. Document titled "Application for Construction Permit for the Research, Development, and Demonstration Project (RDDP), Smiths Creek Landfill Septage Bioreactor, Engineering Report," prepared by CTI & Associates, Inc., and dated July 2006, with revisions dated February 2007, and received February 2, 2007.
 - b. Engineering drawings, numbered 1 through 18, in a plan set titled "Smiths Creek Landfill Septage Bioreactor RDDP Construction Permit Application, Kimball Township, St. Clair County, Michigan," prepared by CTI & Associates, Inc., and dated July 2006, with revisions dated November 2006 and received February 2, 2007.

Licensee: County of St. Clair
Facility Name: Smiths Creek Landfill
Operating License Number: 9177
Issue Date: March 25, 2008

11. The following documents approved since the issuance of the construction permit, referenced in Item 10, are incorporated into this license by reference:
 - a. Document titled "Septage Receiving Facility Operation and Maintenance Plan, Smiths Creek Landfill," prepared by CTI and Associates, Inc., dated June 2006, revised February 2007, and March 2008.
 - b. Document titled "2007 Septage Receiving System Construction Documentation Report, Smiths Creek Landfill," prepared by CTI and Associates, Inc., dated December 2007.
 - c. Document titled "Smiths Creek Landfill, Final Cover Soil Repair Construction Quality Assurance/Quality Control Documentation Letter," prepared by CTI and Associates, Inc., dated January 9, 2008.
12. Consent Order/Judgment Number: WHMD Consent Order Number 115-04-06 entered on August 1, 2006, is incorporated into this license by reference.
13. The licensee shall repair any portion of the certified liner or leachate collection system that is found to be deficient or damaged during the term of this license unless determined otherwise by the MDEQ.
14. The licensee shall have repairs to any portion of the certified liner or leachate collection system recertified by a registered professional engineer in accordance with R 299.4921 of the Part 115 Rules, and approved by the MDEQ before receiving waste in that portion of the certified liner or leachate collection system. The licensee shall submit the recertification to the MDEQ's WHMD, Southeast Michigan District Supervisor, for review and approval.
15. The licensee shall conduct hydrogeological monitoring in accordance with the approved hydrogeological monitoring plan, dated December 2003 and revised March 2004. The sampling analytical results shall be submitted to the MDEQ's WHMD, Southeast Michigan District Office.
16. Modifications to the approved hydrogeological monitoring plan referenced in Item 15 may be approved, in writing, by the WHMD, Southeast Michigan District Supervisor. Proposed revisions must be submitted in a format specified by the MDEQ.
17. Leachate may be recirculated if a leachate recirculation plan has been approved, in writing, by the WHMD, Southeast Michigan District Supervisor.
18. Modifications to approved engineering plans that constitute an upgrading, as defined in R 299.4106a(l) of the Part 115 Rules, may be approved, in writing, by the WHMD, Southeast Michigan District Supervisor.
19. Requests for alternate daily cover may be approved, in writing, by the WHMD, Southeast Michigan District Supervisor.
20. Leakage Control Criteria:

The active portions of the unit(s) authorized to receive waste by this license is a monitorable unit(s) which is located over a natural soil barrier and which is in compliance with the provisions of R 299.4422(2) of the Part 115 Rules.
21. **VARIANCES:** None.
22. **SPECIAL CONDITIONS:**
 - a. The licensee shall place a compacted layer of not less than six inches of earthen material, unless an exemption is granted, of suitable cover material on all exposed solid waste by the end of each working day, as required by R 299.4429(1). Suitable cover shall be either uncontaminated soil or an alternate cover approved by the WHMD, listed in Item 1, below. Alternate cover shall be restricted as indicated in Item ii and applied as per the approved operational plan submitted by the licensee.
 - i. Approved alternate cover shall be any of the following:

Product/Waste Material

See approved alternate daily cover plan listed in Item 8p.

ii. The above materials are approved for daily cover when used in the following manner:

- (1) The licensee shall use the material as daily cover only. The material cannot be used for road building or fill in other areas of the Facility's operation.
- (2) The licensee shall maintain written authorization on site, from the generator of the material, to use the material as daily cover.
- (3) The licensee shall only stockpile material in a secure manner within the active cell.
- (4) This approval does not preclude the licensee from disposing of the material as waste in the active fill area instead of using the material as daily cover.
- (5) This approval shall immediately become void upon documentation by the MDEQ that the alternate cover is not being used in accordance with listed conditions, that the alternate cover is not providing the necessary protection, or that the process producing the waste has changed.
- (6) If the material does not meet the guidelines from Attachment 2 of WHMD's Operational Memo 115-10, Revision 1, for nonvolatiles, the licensee shall ensure that fugitive dust emissions from this material do not occur. Acceptable methods to assure fugitive emissions do not occur are:
 - (a) Implement a schedule to wet down material; or
 - (b) Cover the material with a tarp; or
 - (c) Apply an approved foam or other appropriate commercial dust control product.
- (7) This approval to use alternate cover shall expire upon the expiration of this operating license.

b. The licensee shall submit a Health and Safety Plan to the MDEQ for comment within ninety (90) days of issuance of this license.

23. SPECIAL CONDITIONS SPECIFIC TO THE RDDP:

The following special conditions are specifically related to the RDDP portion of the landfill:

- a. The licensee is authorized to operate the RDDP in accordance with Solid Waste Disposal Area Construction Permit 4085 (Permit Number 4085) issued on February 23, 2007, until February 23, 2010, or any extension of the term of Permit Number 4085 in accordance with Section 11511b(8) of Part 115, unless the RDDP authorization is terminated in accordance with Section 11511b(8) or (9) of Part 115. Any authorization for the RDDP under this license shall remain in effect only as long as Permit Number 4085 remains in effect.
- b. The active landfill gas collection system must be operational before the addition of any materials to accelerate or enhance biostabilization of the solid waste. To control odors, the landfill gas collection system shall collect landfill gas as soon as collectable levels of gas are present either within the waste or within the collection system.
- c. Septage waste and all other liquid waste that is beneficially added, and all other solid waste that is added to the bioreactor cell is subject to county Solid Waste Management Plan limitations and shall be accounted for purposes of the Solid Waste Surcharge payments under Section 11525a of Part 115.
- d. The Septage Receiving Facility must comply with the applicable requirements of Part 117, Septage Waste Servicers, of the NREPA, as well as Part 115.

Licensee: County of St. Clair
Facility Name: Smiths Creek Landfill
Operating License Number: 9177
Issue Date: March 25, 2008

- e. The licensee shall submit a report to the Chief of the WHMD on the progress of the RDDP in achieving its goals. This report will be due on March 25, 2009, and each year thereafter. The report shall, at a minimum, include a summary of all monitoring and testing results, a detailed summary of the type, quantity, and effectiveness of the daily and alternative covers used, a summary of the Septage Receiving Facility (SRF) operation relative to the requirements of the SRF Operation and Maintenance Plan, an assessment of the RDDP showing the progress of the RDDP in achieving its goals, and a list of problems with the RDDP's progress in resolving those problems, including the corrective measures taken or to be taken.
 - f. The licensee shall notify the WHMD, Southeast Michigan District Supervisor, within 24 hours, of any fire event on the site. If the fire even occurs when the district office is closed, then the licensee shall report the incident to the MDEQ's 24-hour Pollution Emergency Alerting System at 800-292-4706 within 24 hours of identification.
 - g. The postclosure period for the bioreactor cell with begin when the MDEQ determines that the unit where the RDDP was authorized has reached a condition similar to that which landfills that were not authorized as RDDPs would reach prior to postclosure. Parameter including moisture content, leachate quality, gas composition and production, waste stability, and waste settlement will be monitored to provide indicators of the start of the postclosure period.
 - h. The Perpetual Care Fund required under Section 11525 of Part 115, shall be maintained for the period after final closure of the bioreactor cell as specified under that section.
 - i. Conversion to Full Scale: The MDEQ Director may authorize the conversion of this RDDP to a full-scale operation if the licensee of the RDDP demonstrates to the satisfaction of the Director that the goals of the RDDP have been met, and the authorization does not constitute a less stringent permitting requirement than is required under Subtitle D of Title 42 of the United States Code, Sections 6941 to 6949a.
24. **TERM:** This license shall remain in effect until its expiration date, unless revoked or continued in effect, as provided for by the Administrative Procedures Act, 1969 PA 306, as amended, or unless superseded by the issuance of a subsequent license.

END OF LICENSE

0' 400' 800'



CTI and Associates, Inc.
12482 Emerson Drive
Brighton, Michigan 48116
248.486.5100

OCTOBER 2007

ATTACHMENT A
FACILITY MAP
SMITHS CREEK LANDFILL
ST. CLAIR COUNTY, MICHIGAN

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